EXHIBIT 3
Redacted Version of Document Sought to be Sealed

1   IN THE UNITED STATES DISTRICT COURT

2   FOR THE NORTHERN DISTRICT OF CALIFORNIA

3   SAN JOSE DIVISION

4   ---o0o---

5   CHASOM BROWN, et al.,   )

     on behalf of themselves and   )

6   all others similarly   )

     situated,   )

7   )

           Plaintiffs,   )Case No.

8   )5:20-cv-03664-LHK

     vs.   )

9   )

     GOOGLE LLC,   )

10   )

           Defendant.   )

11   _____)

12

13   ---o0o---

14   Videotaped Zoom Deposition of

15   DR. CAITLIN SADOWSKI

16   CONFIDENTIAL

17   Thursday, March 10, 2022

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19

20

21

22

23   Katy E. Schmidt

24   RPR, RMR, CRR, CSR 13096

25   Veritext Job No.: 5130524

                                         Page 1

1	MR. MCGEE: Actually, I'd like to go off the	03:56
2	record right now.	03:56
3	MR. ANSORGE: Okay. Let's go off the record.	03:56
4	THE VIDEOGRAPHER: We're now going off the	03:56
5	record. The time is 3:56 p.m.	03:56
6	(Break taken in proceedings.)	03:56
7	THE VIDEOGRAPHER: We are now back on the	04:15
8	record. The time is 4:15 p.m.	04:15
9	(Plaintiffs' Exhibit 2 was	04:15
10	marked for identification.)	04:15
11	BY MR. MCGEE:	04:15
12	Q. Dr. Sadowski, when we went off the record, we	04:15
13	were provided what I've marked as Exhibit 2.	04:15
14	Is that the document that you referenced was	04:15
15	the fax sheet?	04:15
16	A. I should look at the drive folder and see.	04:15
17	Okay. I see something called Exhibit 2. I am	04:16
18	opening it now.	04:16
19	Q. Great. Thank you.	04:16
20	A. Yes. This document is what I had referred to	04:16
21	as, I believe, reference sheet.	04:16
22	Q. Okay. And the third line it says "No fields	04:16
23	named" and in bold "█████████████████████ or	04:16
24	█████████████████."	04:16
25	What is that reference, the "No fields named"?	04:16

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1   What does that mean?   04:16

2   A.   I mentioned I use our internal code search   04:16

3   tool to look up these two field names, and they did not   04:16

4   appear.   04:16

5   Q.   Okay. So it's your testimony that with the   04:16

6   internal code search tool, the ███████████████████   04:16

7   ███████████████████████ search term did not return any   04:17

8   results?   04:17

9   A.   Yes. When I looked at -- when I did a search   04:17

10 for ████████████████████████████████████ across   04:17

11 Google's multibillion line repository that I have access 04:17

12 to internally, I did not get any search results.   04:17

13   Q.   Do you know what data sources that tool   04:17

14 searches over?   04:17

15   MR. ANSORGE: Objection. Vague and out of   04:17

16 scope.   04:17

17 BY MR. MCGEE: 04:17

18   Q.   You can answer.   04:17

19   A.   The code search tool searches over a   04:17

20 multibillion line code base. That's the main code base   04:17

21 that is used at Google.   04:17

22   Q.   Okay. Let me ask it this way: 04:18

23   Are there any data sources that would not be   04:18

24 searched by that tool?   04:18

25   MR. ANSORGE: Objection. Vague.   04:18

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1	THE WITNESS: There are millions or billions	04:18
2	of data sources in the world. Many of them would not be	04:18
3	searched via that tool.	04:18
4	BY MR. MCGEE:	04:18
5	Q. Okay. Let me ask it this way:	04:18
6	Within Google, are there any data sources that	04:18
7	that tool would not search?	04:18
8	MR. ANSORGE: Objection. Vague, and out of	04:18
9	the scope.	04:18
10	THE WITNESS: Yes.	04:18
11	BY MR. MCGEE:	04:18
12	Q. What sources are those?	04:18
13	A. There are many. One example is the chromium	04:18
14	open source repository, which any -- anyone externally	04:18
15	can also search over.	04:19
16	Q. Okay. What other sources would it not search	04:19
17	within Google?	04:19
18	MR. ANSORGE: Same objection.	04:19
19	THE WITNESS: My e-mail.	04:19
20	BY MR. MCGEE:	04:19
21	Q. Okay.	04:19
22	A. As an example.	04:19
23	Q. What other data sources?	04:19
24	A. The --	04:19
25	MR. ANSORGE: Same objection.	04:19

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1	THE WITNESS: -- e-mail of -- oh -- other	04:19
2	e-mails.	04:19
3	BY MR. MCGEE:	04:19
4	Q. What other data source would it not search	04:19
5	over?	04:19
6	A. Documents in a drive folder.	04:19
7	Q. Would it search all log files?	04:19
8	MR. ANSORGE: Objection. Vague, and out of	04:19
9	scope.	04:20
10	THE WITNESS: Code search does not search over	04:20
11	log files. Code search searches over source code.	04:20
12	BY MR. MCGEE:	04:20
13	Q. Okay. Would it search over proto files?	04:20
14	MR. ANSORGE: Objection. Vague.	04:20
15	THE WITNESS: It would search over proto	04:20
16	definitions.	04:20
17	BY MR. MCGEE:	04:20
18	Q. Would it search all available proto	04:20
19	definitions or is it a subset?	04:20
20	MR. ANSORGE: Objection. Calls -- objection.	04:20
21	Calls for speculation and out of scope.	04:20
22	THE WITNESS: It would search over all	04:20
23	proto definitions in Google's main repository.	04:20
24	BY MR. MCGEE:	04:20
25	Q. Okay. Let me ask it this way:	04:20

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1	If there was a field in a log file that had	04:21
2	██████████████████████████████████ but that same	04:21
3	██████████████████████████████████ did not have	04:21
4	a field or a proto definition, would your internal code	04:21
5	search tool return results for that search term?	04:21
6	MR. ANSORGE: Objection. Form, and incomplete	04:21
7	hypothetical.	04:21
8	THE WITNESS: I could create a proto field on	04:21
9	my local machine with any field names that I want, and	04:21
10	create a proto -- a proto file for testing with some	04:21
11	kind of -- or on the machine that I do work -- work at.	04:21
12	So you could create a specific proto with an arbitrary	04:21
13	name and log that specific proto.	04:22
14	BY MR. MCGEE:	04:22
15	Q. Okay. Let me ask you this:	04:22
16	Are all proto fields -- do they all have	04:22
17	descriptions at Google?	04:22
18	MR. ANSORGE: Objection. Vague and	04:22
19	foundation, and out of the scope.	04:22
20	THE WITNESS: I have not seen all proto fields	04:22
21	at Google.	04:22
22	BY MR. MCGEE:	04:22
23	Q. All right. Are there proto fields that you've	04:22
24	seen at Google that did not have descriptions?	04:22
25	A. Yes. But it also depends on what you mean by	04:22

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1   description. I am assuming that you are referring to a   04:22

2   code comment directly above the name of the field. I   04:23

3   have seen proto fields at Google that do not have a code   04:23

4   comment directly above the name of the field.   04:23

5   Q.   Okay.   04:23

6   A.   Typically in those cases the name of the field   04:23

7   is descriptive.   04:23

8   Q.   So if ███████████████████████   04:23

9   ████████ did not have what you just described, would it   04:23

10   still -- would your internal code search tool return any   04:23

11   results for it?   04:23

12   MR. ANSORGE: Objection. Form, and calls for   04:23

13   speculation, and out of scope.   04:23

14   THE WITNESS: If there was a proto field in   04:23

15   the main Google repository that had a particular name,   04:23

16   that field would be returned when searching for it,   04:23

17   regardless of whether there was a comment in the code   04:23

18   next to the field.   04:24

19   BY MR. MCGEE: 04:24

20   Q.   Okay. Let me ask it more on a broad level.   04:24

21   Your search for the ███████████████   04:24

22   ██████████████████ with the internal code search tool,   04:24

23   you said it did not return any results.   04:24

24   Is that correct?   04:24

25   A.   That is correct.   04:24

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1	Q. Are there any other ways that you could search	04:24
2	to see if the ████████████████████████████████	04:24
3	search term exists within any -- exists at Google?	04:24
4	So just to give you an example, I understand	04:24
5	that you're saying that the internal code search tool is	04:24
6	limited in what it can return because of the limitations	04:24
7	that you just described.	04:24
8	Are there other ways to search for that ███	04:24
9	████████████████████████████ at Google?	04:25
10	MR. ANSORGE: Objection. Form. Compound.	04:25
11	And out of the scope.	04:25
12	THE WITNESS: I could -- there are always ways	04:25
13	to search for something. I could, for example, navigate	04:25
14	to a doc in my drive folder and search over that doc.	04:25
15	I could use public Google search and search for that	04:25
16	term -- for that string rather, just, you know, not	04:25
17	anything that's Google internal but something that's	04:25
18	visible equally outside of Google.	04:25
19	As I mentioned, there are other repositories,	04:25
20	like the chromium open source repository. There could	04:25
21	be other code or documents at Google that I do not have	04:25
22	access to. Over the main multibillion line repository,	04:25
23	I did not see a field with that name.	04:26
24	BY MR. MCGEE:	04:26
25	Q. Okay. For -- okay. What dashboards are	04:26

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1	going to belabor the questions. They're the same. I	05:49
2	won't even ask them to you.	05:49
3	So if you can turn to Exhibit 14, please.	05:49
4	A. I still see 12 as the top one so...	05:49
5	Q. Oh, okay.	05:49
6	A. Just a minute. I'm reloading.	05:49
7	Q. Yeah. No problem.	05:49
8	A. Okay. I see something called Exhibit 14. I'm	05:50
9	opening it.	05:50
10	I see what appears to be a shorts design	05:50
11	document that starts with ▮▮▮▮▮▮▮▮▮▮▮▮	05:50
12	▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮	05:50
13	Q. Have you ever seen this design document	05:50
14	before?	05:50
15	A. Yes.	05:50
16	Q. When?	05:50
17	A. In preparation for this deposition.	05:50
18	Q. Did you speak with anybody in preparation for	05:50
19	this deposition about this design document?	05:50
20	A. Yes.	05:50
21	Q. Who, aside from your lawyers?	05:50
22	A. Quentin Fiard.	05:50
23	Q. And what department is Quentin Fiard with in	05:50
24	Google?	05:51
25	A. I don't remember what he works on right now,	05:51

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 1   but he used to work on ████  in -- on ████   at the       05:51

 2   time this document was produced.                          05:51

 3        Q.   Okay.  And why did you choose to speak with      05:51

 4   Quentin Fiard about this document?                        05:51

 5        A.   From the comment threads in the document, it's   05:51

 6   clear that he is the person who is most knowledgeable      05:51

 7   about the document.                                       05:51

 8        Q.   Okay.  Did you speak with anyone else whose      05:51

 9   identity is reflected in this document?                   05:51

10            MR. ANSORGE:  Objection.  Form, and vague.        05:51

11            THE WITNESS:  In the comments I see a             05:51

12   selection of four different user names.                   05:51

13            Are you asking about that set of four user        05:52

14   names?                                                    05:52

15            MR. MCGEE:  Yes.                                  05:52

16            THE WITNESS:  Quentin Fiard I spoke to in         05:52

17   preparation for this deposition, and not previously.      05:52

18            The only other user name that I recognize is     05:52

19   msramek.                                                  05:52

20   BY MR. MCGEE:

21        Q.   And who is that?                                 05:52

22        A.   He has Chrome's privacy working group.  We       05:52

23   have a close relationship because we take user privacy    05:52

24   very seriously, and we talk to the privacy working group  05:52

25   whenever there is anything that comes up related to       05:52
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 1   privacy that we have questions about and to ensure that    05:52

 2   we are upholding all the privacy policies that Google as    05:52

 3   a company supports and that we want to be supporting as     05:52

 4   a team.                                                     05:53

 5        Q.   And what is that person's name?                  05:53

 6        A.   Martin Sramek.                                    05:53

 7        Q.   Do you know how to spell Martin's last name?     05:53

 8        A.   I believe it is S-r-a-m-e-k.  The same as in     05:53

 9   this user name.                                             05:53

10        Q.   Okay.  And what is this design document?  What   05:53

11   is it talking about?                                        05:53

12             MR. ANSORGE:  Objection.  Vague, and form.       05:53

13             THE WITNESS:  Reading from the design            05:53

14   document:                                                   05:53

15   ████████████████████████████████████████████              05:53

16   ██████████████████████████████████████████████            05:53

17   ████████████████████████     █████████████████████        05:53

18   ████████████████████████████████████                      05:53

19   █████████████████████████████████████████████             05:53

20   ████████████████████                                       05:53

21             Do you -- would you like me to keep reading?     05:54

22             MR. MCGEE:  I thank you for pausing.  I would    05:54

23   not like you to keep reading.                               05:54

24   BY MR. MCGEE:                                               05:54

25        Q.   Does this design document relate to any          05:54
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1	particular bit?	05:54
2	Well, let me back that up.	05:54
3	Are you familiar with something within Google	05:54
4	being described as a bit or a field?	05:54
5	MR. ANSORGE: Objection. Vague and compound.	05:54
6	THE WITNESS: Many things within Google are	05:54
7	described as a bit or a field, either colloquially or	05:54
8	exactly. At some level ultimately your computer is just	05:54
9	a sequence of bits.	05:54
10	MR. MCGEE: Right. Ones and zeros.	05:54
11	BY MR. MCGEE:	05:54
12	Q. But a field in a log, are you familiar with	05:54
13	that description or colloquialism at Google?	05:54
14	MR. ANSORGE: Objection. Vague, and out of	05:55
15	scope.	05:55
16	THE WITNESS: Yes.	05:55
17	BY MR. MCGEE:	05:55
18	Q. And does this design document relate to any	05:55
19	field or fields at Google?	05:55
20	A. Yes.	05:55
21	Q. Which?	05:55
22	A. I'm reading from my reference sheet to make	05:55
23	sure I get it right.	05:55
24	This design document is related to the	05:55
25	██████████████████████████████████	05:55

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1	████████ mode.	05:55
2	Q. And how do you know that?	05:55
3	A. Because the source code for that particular	05:56
4	field, as you say, has a link to this design document	05:56
5	and says that it is -- annotation that it is	05:56
6	specifically limited to ██████ logs.	05:56
7	Q. And what is an ██████ log?	05:56
8	A. ████████████████████████, is my	05:56
9	understanding.	05:56
10	Q. And are they keyed by any particular	05:56
11	identifiers?	05:56
12	MR. ANSORGE: Objection. Vague, and out of	05:56
13	the scope.	05:56
14	BY MR. MCGEE:	05:56
15	Q. You can answer.	05:56
16	A. There is a -- looking at my reference sheet,	05:57
17	there is a set of ██████ logs that is not GAIA keyed	05:57
18	and there are some ██████ logs that are ████████	05:57
19	████████████████.	05:57
20	Q. Okay. And I see that from your reference	05:57
21	sheet.	05:57
22	When you say that the ████████████████	05:57
23	████████████████████████ is non-GAIA keyed,	05:57
24	what does that mean? How would you explain that?	05:57
25	A. Sorry. There was a beep when you were talking	05:57

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1	so I -- part of it cut off.	05:57
2	Q. Sure.	05:57
3	I'm asking -- let me mute my computer -- your	05:57
4	colleagues were e-mailing me.	05:57
5	The ████████████████████████	05:57
6	████████████████ , you said that it's not GAIA keyed.	05:57
7	What do you mean by that?	05:58
8	A. I did not say that ████████████	05:58
9	████████████████████████████ mode is	05:58
10	not GAIA keyed. You had asked about ███████ logs.	05:58
11	Q. Okay. Let me just then back it up.	05:58
12	On your information sheet, Notice 2, Topic 10,	05:58
13	there are -- there appear to be two field names or --	05:58
14	let me back it up so we're speaking the same language.	05:58
15	What would you consider the ████████████	05:58
16	████████████████████████ -- how --	05:58
17	what -- how would someone at Google describe that? Is	05:58
18	it a field? Is it a field name? Is it a bit? I'm	05:59
19	trying to understand that. What's the jargon that	05:59
20	someone at Google would use to refer to those?	05:59
21	MR. ANSORGE: Objection. Compound.	05:59
22	THE WITNESS: I think there are many different	05:59
23	ways someone at Google might use to refer to those.	05:59
24	There is multiple jargon we could call it.	05:59
25	So I would say that ████████████████	05:59

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1	████████████████████████████ mode is	05:59
2	a binary field that is specifically used only in temp	05:59
3	████ logs.	05:59
4	BY MR. MCGEE:	05:59
5	Q. And why is it only in temp ████ logs?	05:59
6	A. It was a field that was created by the ████	06:00
7	team to help them understand potential problems with	06:00
8	their product location and where searching so that they	06:00
9	could develop the best product possible for Google	06:00
10	users.	06:00
11	Q. Okay. And it -- there's a note here that it	06:00
12	was introduced in 2017, but then the project wrapped up	06:00
13	in June of 2018.	06:00
14	Is that binary field still implemented at	06:00
15	Google?	06:00
16	MR. ANSORGE: Objection. Vague.	06:00
17	THE WITNESS: That binary field is -- still	06:00
18	exists as a binary field in and only in ████ logs.	06:00
19	BY MR. MCGEE:	06:01
20	Q. Are values written to that binary field in	06:01
21	████ logs?	06:01
22	A. Yes. I believe values are written to that	06:01
23	binary field in ████ logs.	06:01
24	Q. So even though the project wrapped in June of	06:01
25	2018, that is still an actively used binary field?	06:01

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1	MR. ANSORGE: Objection. Form.	06:01
2	THE WITNESS: As I understand it, it is not	06:01
3	actively used. It is still being written. It is not	06:01
4	being reviewed.	06:01
5	BY MR. MCGEE:	06:01
6	Q. Can you please clarify what you mean by "not	06:01
7	being reviewed"?	06:01
8	A. ▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓	06:02
9	▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓	06:02
10	▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓	06:02
11	▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓	06:02
12	▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓	06:02
13	▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓	06:02
14	▓▓▓▓▓▓▓▓▓▓▓▓▓	06:02
15	▓▓▓▓▓▓▓▓▓▓▓▓▓	06:02
16	▓▓▓▓▓▓▓▓▓▓▓▓▓▓	06:02
17	▓▓▓▓▓▓▓▓	06:02
18	▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓	06:02
19	▓▓▓▓▓▓▓▓▓▓▓▓▓▓	06:02
20	▓▓▓▓▓▓▓▓▓▓▓▓▓▓	06:02
21	▓▓▓▓▓▓▓▓▓▓▓ ▓▓▓▓▓	06:03
22	▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓	06:03
23	▓	06:03
24	▓▓▓▓▓▓▓▓▓▓▓▓▓	06:03
25	▓▓▓▓▓▓▓▓▓▓▓▓	06:03

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1	████████████████████████████████	06:03
2	████████████████	06:03
3	Q. But if they pulled up the graph, there would	06:03
4	be responsive data that would fill in the graph;	06:03
5	correct?	06:03
6	MR. ANSORGE: Objection. Vague, and calls for	06:03
7	a legal conclusion.	06:03
8	THE WITNESS: I don't know what you mean by	06:03
9	responsive data that would fill in the graph.	06:03
10	BY MR. MCGEE:	06:03
11	Q. Sure.	06:03
12	So you're saying they aren't looking at the	06:03
13	graph anymore. They're not reviewing it.	06:03
14	What I'm asking is: Is if they did pull up	06:04
15	the graph, the graph would still have lines or bars or	06:04
16	whatever visual representation or graphical	06:04
17	representation the graph was designed to display.	06:04
18	Is that fair?	06:04
19	MR. ANSORGE: Objection. Compound. Form.	06:04
20	THE WITNESS: My understanding is that ██	06:04
21	███████████████████████████████████	06:04
22	████████ mode is a field that is being filled in in	06:04
23	███ -- not ███ -- not in ███ logs. It is not in ███	06:04
24	logs, to be clear. It is only in ██████ logs. And it	06:04
25	is a field that is still being filled in in ██████ logs	06:04

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 1   today, despite the fact that the reason the field was      06:04

 2   introduced has passed.                                      06:04

 3   BY MR. MCGEE:                                               06:05

 4       Q.   Okay.  And from your fact sheet, the              06:05

 5   ██████████████████████████████████████████                06:05

 6   ████████    -- so without the underscore mode --           06:05

 7           THE COURT REPORTER:  I'm so sorry, Counsel.        06:05

 8   Can you start that question over?  There was a little      06:05

 9   bit of feedback.  I didn't get it.                         06:05

10           MR. MCGEE:  Sure.                                  06:05

11   BY MR. MCGEE:                                               06:05

12       Q.   So the -- you've got two bullet points in your    06:05

13   fact sheet.                                                 06:05

14           One is the ███████████████████████                06:05

15   ██████████████████████, no GAIA.                          06:05

16           What does that mean?                               06:05

17       A.   What that means is that the -- these ██████       06:05

18   logs that have this field set are not GAIA keyed.  ████    06:05

19   ████████████████████████  ████████████████████████        06:05

20   ███████████████████████████████  ██████████████████       06:06

21   ███████████████████████████████████████████              06:06

22   ███████████████████                                        06:06

23       Q.   Got it.                                           06:06

24       A.   And not -- notably not GAIA IDs.                  06:06

25       Q.   Understood.                                       06:06
```

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1	And then in ███████████████████	06:06
2	██████████ there are either ███████████████	06:06
3	████████████████?	06:06
4	A. To be clear --	06:06
5	MR. ANSORGE: Objection. Form.	06:06
6	THE WITNESS: There are not ████████	06:06
7	█████████████████ inside ███████████████	06:06
8	████████████████. I believe that is the name of a	06:06
9	field that is in the logs listed on this reference sheet	06:07
10	below. Those logs have a ███████████████████████	06:07
11	in them, as well as this field.	06:07
12	BY MR. MCGEE:	06:07
13	Q. Do you know what other identifiers exist in	06:07
14	the GFS temp slash -- okay. Let me just -- I'm not even	06:07
15	going to read it out for you.	06:07
16	But what other identifiers exist in the first	06:07
17	sub-bullet point of the ████████████████████████	06:07
18	████████████████ list there?	06:07
19	MR. ANSORGE: Objection. Vague. Out of the	06:07
20	scope, and foundation.	06:07
21	THE WITNESS: I am not familiar with the full	06:07
22	set of things that is in this -- in that log. I can	06:07
23	tell you there is not an un-obfuscated GAIA ID. I can	06:08
24	also tell you that there is no direct mapping of this to	06:08
25	███. So there is no ███ client ID or a way to somehow	06:08

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1   combine this with ███ data.   06:08

2   MR. MCGEE: I think we've been going for about   06:08

3   40 minutes now. I just need to take a break so --   06:08

4   MR. ANSORGE: Yeah. I'm fine with that.   06:08

5   Could we get a time count as well? How much   06:08

6   time is left on the record?   06:08

7   THE VIDEOGRAPHER: Yeah. So off the record?   06:08

8   MR. MCGEE: Yes. Off the record.   06:08

9   THE VIDEOGRAPHER: Okay. We're now going off   06:08

10   the record. The time is 6:08 p.m.   06:08

11   (Break taken in proceedings.)   06:17

12   THE VIDEOGRAPHER: We are now back on the   06:17

13   record. The time is 6:18 p.m.   06:17

14   BY MR. MCGEE: 06:18

15   Q.   Dr. Sadowski, for the bits that we were -- or   06:18

16   excuse me -- the binary fields that we were just talking 06:18

17   about, the ███████████████████████████   06:18

18   ████████████████████████████ mode, ███████████   06:18

19   ████████████████████████████████, and   06:18

20   ██████████████████████████████, do you know   06:18

21   what logic is being used to derive the values that are   06:18

22   stored in those binary fields?   06:18

23   MR. ANSORGE: Objection. Vague and compound.   06:18

24   THE WITNESS: I believe the ███████████   06:18

25   ████████████████████████████ is referring   06:18

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1	to the same thing as ▇▇▇▇▇▇▇▇	06:18
2	▇▇▇▇▇▇▇▇ mode. I do know about	06:18
3	how that field is filled in.	06:19
4	BY MR. MCGEE:	06:19
5	Q. Okay. And what's the logic for filling in	06:19
6	that field?	06:19
7	A. It looks specifically at whether there is an	06:19
8	X-Client -- X hyphen Client hyphen Data header in the	06:19
9	request that is sent.	06:19
10	Q. Is there any other thing that it looks for or	06:19
11	is that all that it looks for?	06:19
12	A. I believe that is all that it looks for. The	06:19
13	▇▇▇▇▇▇▇▇▇▇▇	06:19
14	▇▇▇▇▇ mode is if there is a X-Client-Data --	06:19
15	X-Client-Data header sent, then that is the logic used	06:20
16	to set that to true.	06:20
17	This is a proxy for incognito, but it is not	06:20
18	a what I would call a reliable or accurate way to	06:20
19	determine incognito usage.	06:20
20	Q. Okay. And what's the -- what types of traffic	06:20
21	is this logic being applied to? Is it mobile traffic?	06:20
22	Is it -- you know, is it platform specific?	06:20
23	MR. ANSORGE: Objection. Vague and compound.	06:20
24	THE WITNESS: It is in ▇▇▇ logs ▇▇▇▇	06:21
25	▇▇▇▇▇▇▇. I believe it will be	06:21

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1	cross-platform, but I do not know for certain. I would	06:21
2	have to investigate.	06:21
3	BY MR. MCGEE:	06:21
4	Q. Who would you speak with at Google to	06:21
5	investigate that?	06:21
6	A. I would speak again with Quentin Fiard if I	06:21
7	had a question about the -- this particular field in	06:21
8	Oolong logs.	06:21
9	Q. Okay. And then I did this backwards but --	06:21
10	apologies.	06:21
11	I can -- I've introduced two new exhibits.	06:21
12	They're going to be 16 and 15.	06:22
13	(Plaintiffs' Exhibits 15 and 16	06:22
14	were marked for identification.)	06:22
15	BY MR. MCGEE:	06:22
16	Q. But I'd actually like you to look at 16 first.	06:22
17	A. 16 first? Okay. I'm waiting for it to load.	06:22
18	Q. Thank you.	06:22
19	A. One other thing to answer your question.	06:22
20	To the best of my knowledge the ███████████	06:22
21	███████████████████████ field is derived from the	06:22
22	██████████████████████████████████████	06:22
23	███████ mode. It is still depending on X-Client-Data	06:22
24	header logic and also looking at the user agent, but it	06:22
25	is not derived through some other mechanism than	06:22

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1	presence or absence of X-Client-Data header, and	06:23
2	suffers from the same limitations.	06:23
3	Q. So for the ████████████████████	06:23
4	███████████████████, does that look -- you	06:23
5	mentioned user agent.	06:23
6	Does that one look at user agent?	06:23
7	A. To the best of my recollection, it does not.	06:23
8	It is looking at whether there is an X-Client-Data	06:23
9	header with the assumption that it would be coming from	06:23
10	Chrome if that header shows up. That assumption could	06:23
11	be false, but I would -- Chrome is the browser that use	06:23
12	that header.	06:23
13	Q. So then why does ████████████████	06:23
14	████████████████ look at a user agent in addition to	06:23
15	the X-Client-Data header?	06:24
16	MR. ANSORGE: Objection. Vague.	06:24
17	THE WITNESS: If you are looking at -- so if	06:24
18	you have an X-Client-Data header, that implies that it's	06:24
19	coming from Chrome. The absence of an X-Client-Data	06:24
20	header does not -- in some kind of data sense does not	06:24
21	have the same implication.	06:24
22	BY MR. MCGEE:	06:24
23	Q. Okay.	06:24
24	A. Should I look at Exhibit 16?	06:24
25	Q. Yes, please. Exhibit 16.	06:24

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1	Actually --	06:24
2	A. There --	06:25
3	Q. -- I'm really sorry. Can you look at	06:25
4	Exhibit 15, please?	06:25
5	A. Okay. I see a document at the top in blue it	06:25
6	says "Document 338," and it starts with "In The	06:25
7	United States District Court For The Northern District	06:25
8	of California, San Jose Division."	06:25
9	Q. Have you ever seen this document before?	06:25
10	A. The preamble looks unfamiliar. I am scrolling	06:25
11	down.	06:25
12	This document looks unfamiliar.	06:26
13	Q. Okay. Do you know who Andre Goleuke is,	06:26
14	G-o-l-e-u-k-e? I apologize if I mispronounced that.	06:26
15	MR. ANSORGE: Objection. Out of the scope.	06:26
16	BY MR. MCGEE:	06:26
17	Q. You can answer.	06:26
18	A. No, I do not.	06:26
19	Q. Okay. If you'll turn to what was attached as	06:26
20	Exhibit A.	06:26
21	The logs you identified under "Fact Sheet,"	06:26
22	under "Notice 1, Topic 10," do any of those logs or data	06:26
23	sources appear in Exhibit A, whether directly or by any	06:26
24	other name?	06:27
25	MR. ANSORGE: Objection. Vague. Compound.	06:27

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1	Foundation, and out of the scope.	06:27
2	THE WITNESS: I do not see those -- the --	06:27
3	those particular strings in this document. I am not	06:27
4	familiar with many of the names in this document or how	06:27
5	it was generated. I just saw it. So I cannot answer	06:27
6	the "by any other" name parts.	06:27
7	But this document -- I do not see the word	06:27
8	███████ in this document, and the log sources you were	06:27
9	referencing were ██████ logs.	06:28
10	BY MR. MCGEE:	06:28
11	Q. Okay. So by way of example, if we go to the	06:28
12	sixth page of the document itself -- there's eight	06:28
13	pages -- there's a ██████████████	06:28
14	That -- is there any possibility that the	06:28
15	first log source that's listed under the first bullet	06:28
16	point could be referred to as ████████████████?	06:28
17	MR. ANSORGE: Objection. Vague.	06:28
18	Mischaracterizes the evidence and foundation. And out	06:28
19	of scope.	06:28
20	BY MR. MCGEE:	06:28
21	Q. You can answer.	06:28
22	A. Your question was whether the specific strings	06:28
23	representing log sources listed in the reference sheet	06:29
24	would be referred to as ██████████████?	06:29
25	Q. By way of example. Sure.	06:29

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1   A.   I would be very surprised.   06:29

2   Q.   Okay.   06:29

3   A.   If someone referred to those as ███████████,   06:29

4 I would expect someone to refer to them as ███████ logs   06:29

5 or have the word ████████ in the name. That is the name   06:29

6 used to refer to logs for that particular product and   06:29

7 they are only for ███████.   06:29

8   Q.   Okay. And if I can draw your attention to   06:29

9 Exhibit 16.   06:29

10   A.   But I'm not going to speculate what other   06:29

11 people could refer to something as. I would refer to   06:30

12 them as ██████ logs, and would generally expect that   06:30

13 people would refer to them as ███████ logs or with the   06:30

14 word ████████ in the name.   06:30

15   I have a document that says "Contains   06:30

16 Information Designated 'Highly Confidential Attorneys'   06:30

17 Eyes Only'" as the -- in quotes as the top line and then   06:30

18 a lot of names.   06:30

19   Q.   Okay. And I'm presenting it to you. There's   06:30

20 a lot of instructions. But on the sixth page of the   06:30

21 document, and it is a "6" at the bottom, there's a   06:30

22 topic. And I'd represent that this is the topic that   06:30

23 you were designated for but I don't believe --   06:30

24   And there's a carve-out, and Mr. Ansorge -- or   06:30

25 excuse me -- Dr. Ansorge will describe the carve-out.   06:30

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```
 1           But that you've been partially designated to      06:30

 2   testify on this topic.                                     06:31

 3           And I apologize, the lights in my office went      06:31

 4   out.                                                       06:31

 5           MR. ANSORGE:  Dr. Sadowski is designated for       06:31

 6   the ██████████████████████████████ field, for             06:31

 7   the ████████████████████████████ field,                   06:31

 8   and for the ██████████████████████████████               06:31

 9   field.  She's not designated for the                      06:31

10   ████████████████████ field, nor for anything else          06:31

11   that's covered by this topic, and all the questions that   06:31

12   relate to ████████████████████ field or dashboard          06:31

13   fields on that are out of the scope.                       06:31

14           MR. MCGEE:  Okay.  But to be clear, Mr. --         06:31

15   Dr. -- I -- it's late.                                     06:31

16           Dr. Ansorge, it's -- part of the topic             06:31

17   includes why Google developed, implemented, and used any   06:31

18   such bit or field.  Also includes the log or traffic       06:31

19   sources, as well as the design used to determine the bit   06:32

20   or field, as well as any logs or data sources where such   06:32

21   a bit or field is used and how it is used.                 06:32

22           So I understand she's not designated for           06:32

23   ████████████████████████████████, but for                 06:32

24   the other three, you're not limiting her testimony based   06:32

25   on the further clarification of the topic, are you?        06:32
```

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1	MR. ANSORGE: For the other three, she's	06:32
2	already testified as to the development, the	06:32
3	implementation, the use of bits and fields. We've gone	06:32
4	over those.	06:32
5	MR. MCGEE: Understood. Just making sure	06:32
6	we're clear.	06:32
7	I see. Okay.	06:33
8	And -- okay. I see what you're saying.	06:33
9	So Notice 2, Topic 10 has overlap with	06:33
10	Notice 4, Topic 1, is what you're saying, Dr. Ansorge?	06:33
11	MR. ANSORGE: I'm not sure it's Notice 4,	06:33
12	Topic 1, that that's a specific exhibit you're referring	06:33
13	to.	06:33
14	MR. MCGEE: Exhibit 16. Sure.	06:33
15	MR. ANSORGE: Dr. Sadowski already testified	06:33
16	as to each of those three fields.	06:33
17	MR. MCGEE: Right.	06:33
18	BY MR. MCGEE:	06:33
19	Q. So, Dr. Sadowski, I understand that in the	06:33
20	beginning we spoke about this, but the -- you used an	06:33
21	internal code search tool to look for ███████████	06:33
22	████████████████████. That returned no results	06:33
23	but that tool did not search all data sources for	06:34
24	Google; correct?	06:34
25	MR. ANSORGE: Objection. Mischaracterizes	06:34

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1	prior testimony.	06:34
2	THE WITNESS: I searched on our internal code	06:34
3	search tool over the multibillion line repository that	06:34
4	is viewable to me internally, and did not see that field	06:34
5	in the history of the repository.	06:34
6	BY MR. MCGEE:	06:34
7	Q. Okay. And then the same thing for ▮▮▮▮	06:34
8	▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮	06:34
9	A. If you search for ▮▮▮▮▮▮▮▮	06:34
10	▮▮▮▮▮▮▮▮▮▮▮▮ in the internal code search	06:34
11	and browsing tool over the multibillion line repository	06:34
12	that's visible to me, when I did that, I got hits for	06:35
13	▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮	06:35
14	▮▮▮▮▮ mode.	06:35
15	Q. Okay. Did you do any other searches for	06:35
16	fields or bits that would contain the term "incognito"?	06:35
17	A. No.	06:35
18	MR. ANSORGE: Objection. Vague.	06:35
19	BY MR. MCGEE:	06:35
20	Q. Did you do any other research or speak with	06:35
21	anyone at Google to determine whether any such fields	06:35
22	were developed whose function was intended to detect	06:35
23	incognito usage?	06:35
24	MR. ANSORGE: Objection. Vague and out of	06:35
25	the scope.	06:35

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1	THE WITNESS: The only accurate way I know	06:36
2	about to report incognito usage statistics is through	06:36
3	▉ because ▉ is so privacy preserving that we can	06:36
4	report statistics about incognito usage. We do not have	06:36
5	other ways that we generate statistics -- accurate	06:36
6	statistics about incognito usage.	06:36
7	BY MR. MCGEE:	04:15
8	Q. Right.	04:15
9	A. There is one proxy, this -- using the	06:36
10	X-Client-Data header that's -- we have talked about the	06:36
11	▉ team used, but that is -- I would not	06:36
12	characterize that as a reliable way to look at	06:36
13	incognito usage statistics.	06:36
14	If someone asked me how to look at incognito	06:36
15	usage statistics, I would say the ways through ▉ and	06:36
16	the metrics are visible in the external open source	06:36
17	chromium repository for full transparency.	06:37
18	Q. Okay. And did you do any further research to	06:37
19	see if any other fields can -- ever containing the word	06:37
20	"incognito" were implemented by Google, aside from the	06:37
21	four that are in this document and that you've	06:37
22	previously described?	06:37
23	MR. ANSORGE: Objection. Vague, and out of	06:37
24	the scope.	06:37
25	THE WITNESS: I did not do research on whether	06:37

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1	there are fields in some protocol buffer at Google that	06:37
2	use the word "incognito." That is an English word that	06:37
3	could have multiple meanings and could be used in	06:37
4	arbitrary ways by arbitrary people at Google.	06:37
5	BY MR. MCGEE:	06:37
6	Q. Okay. And did you do any research to see if	06:38
7	any such bit or field containing the word "incognito" is	06:38
8	being used at Google, other than what you've testified	06:38
9	to today?	06:38
10	MR. ANSORGE: Objection. Out of the scope.	06:38
11	Form. And asked and answered.	06:38
12	THE WITNESS: I believe I already answered	06:38
13	that. I did not do extra research about fields in	06:38
14	protocol buffers related to incognito beyond what we	06:38
15	have talked about today.	06:38
16	BY MR. MCGEE:	06:38
17	Q. Okay. Who at Google is responsible for	06:38
18	maintaining the ▮ dashboards?	06:38
19	MR. ANSORGE: Objection. Vague, and out of	06:38
20	scope.	06:38
21	THE WITNESS: My team.	06:38
22	BY MR. MCGEE:	06:39
23	Q. I'm sorry. You said your team?	06:39
24	A. My -- I manage the Chrome metrics team which	06:39
25	owns ▮ infrastructure, including the dashboards.	06:39

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1	Q. Okay. And who are those dashboards accessible	06:39
2	by at Google?	06:39
3	MR. ANSORGE: Objection. Vague.	06:39
4	THE WITNESS: The ███ dashboards are generally	06:39
5	available to engineers at Google. Generally viewable by	06:39
6	engineers at Google.	06:39
7	BY MR. MCGEE:	
8	Q. For the -- going back to Exhibit No. 2, your	06:40
9	fact sheet, how did you determine for the Zwieback	06:40
10	logs -- how did you determine that those were the ███	06:40
11	responsive logs that contain that binary field?	06:40
12	A. What do you mean by Zwieback logs? Zwieback	06:40
13	is a type of ID, not a type of log.	06:40
14	Q. Right.	06:40
15	The ███████████████████████████████	06:40
16	and that it would -- ████████████████████ and	06:40
17	then you list ███ logs; right?	06:41
18	How did you determine a -- how was that list	06:41
19	created? How were those logs identified?	06:41
20	A. By asking Quentin Fiard.	06:41
21	If you're asking where did these bullet points	06:41
22	come from, he's the person that I talked to that knows	06:41
23	about ██████ logs.	06:41
24	Q. Okay. And did he explain how he populated	06:41
25	that list?	06:41

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1   MR. ANSORGE: Objection. Vague.   06:41

2   THE WITNESS: Populated what list?   06:42

3   BY MR. MCGEE: 06:42

4   Q.   The ██ log sources that are on that list, did 06:42

5   he explain how he identified those? Or did you just 06:42

6   take his word for it?   06:42

7   MR. ANSORGE: Objection. Compound, and   06:42

8   argumentative.   06:42

9   THE WITNESS: I asked him about the -- what   06:42

10   logs were stored in ██████ and what their retention 06:42

11   periods were, and he came back with this list.   06:42

12   BY MR. MCGEE: 06:42

13   Q.   When you did the internal code search for all 06:43

14   of these binary fields that we've identified in both 06:43

15   Notice 2, Topic 10, and then the other notice, did you 06:43

16   save the results of your queries?   06:43

17   A.   No.   06:43

18   Q.   Why not?   06:43

19   A.   Because the way code search works, you search 06:43

20   for something, similar to Google search, you don't save 06:43

21   the results of your search if you are just looking up 06:43

22   a -- a stat -- like if you're looking if for definition 06:43

23   of a word or doing some math.   06:43

24   Q.   But I can .pdf the results of a Google search; 06:43

25   right?   06:43

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1   MR. ANSORGE: Objection. Form, and out of the   06:43

2   scope.   06:44

3   THE WITNESS: When developers look at or   06:44

4   browse source code, they use the code search tool. They 06:44

5   do not save a copy of that tool on the side. That is an 06:44

6   internally available code search tool. You generally   06:44

7   shouldn't print out or save any kind of source code on 06:44

8   your local machine.   06:44

9   So the way that you would view source code is   06:44

10   through the code search tool. You don't save a copy of 06:44

11   your results. You search for results afresh if you want 06:44

12   to see them again.   06:44

13   BY MR. MCGEE: 06:44

14   Q.   Okay. When you -- did you use the internal   06:44

15   code search tool to search for the ████████████████   06:44

16   ████████████████████ ?   06:45

17   A.   I looked up ████████████████████████   06:45

18   ████████ , ████████████████████████████████████ ,   06:45

19   and ████████████████████████████████████   06:45

20   ████████████████ mode, and that returns the same   06:45

21   set of results as ████████████████████████████   06:45

22   ████████ .   06:45

23   Q.   Okay. But -- sorry. To be clear, did you run   06:46

24   ██ through the 06:46

25   internal code search tool?   06:46

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1	A. No.	06:46
2	Q. But you did run the other one. And is that	06:46
3	how the list of log sources was populated in this	06:46
4	Exhibit 2 for Notice 2, Topic 10?	06:46
5	A. The way that the --	06:46
6	MR. ANSORGE: Objection. Vague.	06:46
7	THE WITNESS: The list -- the bulleted list in	06:46
8	Notice 2, Topic 10 were populated by Quentin Fiard.	06:46
9	BY MR. MCGEE:	
10	Q. Okay. But when you ran the ▮▮▮▮▮▮	06:46
11	▮▮▮▮ -- when you ran ▮▮▮▮▮▮▮▮▮ -- you	06:46
12	did -- let me ask it this way:	06:47
13	You did a lot of -- or you did a few internal	06:47
14	code search queries; right?	06:47
15	A. Yes.	06:47
16	I would also like to note that in the course	06:47
17	of my job, I frequently run internal code search	06:47
18	queries.	06:47
19	Q. Okay.	06:47
20	A. I did a couple code search queries in	06:47
21	preparation for this case, either yesterday or this	06:47
22	morning. It has blended together and I'm not sure	06:47
23	which. But I make queries in code search in the normal	06:47
24	course of my job.	06:47
25	Q. Okay. And one of those queries returned	06:48

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1   results; right?   06:48

2   A.   Yes. If you search for ███████████████   06:48

3   ██████████████████████, that substring is part of a   06:48

4   name of a Boolean field in ██████ logs that I have   06:48

5   already testified about. And that binary field is using   06:48

6   X-Client-Data header information to proxy incognito   06:48

7   states. It is not an accurate name for the binary   06:48

8   field, and it is not used in ███ logs.   06:49

9   Q.   Okay. I think I am -- very close. Just want   06:49

10   to make sure.   06:49

11   Does the ███████████████████████████   06:49

12   ███████████████████████████████████ mode bit exist in   06:49

13   non-██████ logs?   06:49

14   A.   To the best of my knowledge, that is the only   06:49

15   place it exists. If you -- this particular binary field   06:49

16   was developed with -- in -- as part of the design doc   06:50

17   that we reviewed earlier so that the ██████ team could   06:50

18   look at how often they don't get a location header when   06:50

19   they're expecting to get a location header using the   06:50

20   presence -- or using the presence of the X-Client --   06:50

21   presence or absence of the X-Client-Data header as a   06:50

22   proxy here for situations when you would or wouldn't   06:50

23   expect to get a location header.   06:50

24   Q.   I understand that.   06:50

25   A.   And that is the only way it is being used, to   06:50

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1	my knowledge.	06:50
2	Q. And what is the basis of your knowledge for --	06:50
3	what's the basis of your knowledge for that conclusion?	06:50
4	A. A few different things.	06:51
5	Talking to Quentin Fiard who was involved in	06:51
6	actually implementing this field.	06:51
7	Looking in code search, including historical	06:51
8	code search, for where this field is set and used.	06:51
9	And also if you look in the protocol buffer	06:51
10	that has this field, there is an annotation saying that	06:51
11	it is specifically only used in ████ logs.	06:51
12	And that there's also a comment that links to	06:51
13	the design doc that we talked about earlier that is	06:51
14	related to this field.	06:51
15	Q. And that comment is on an internal document at	06:51
16	Google?	06:51
17	A. It is a source code comment.	06:51
18	Q. Okay.	06:52
19	A. Not a document comment. And it is a comment	06:52
20	directly above the definition of this field.	06:52
21	MR. MCGEE: Okay. I don't have any further	06:52
22	questions.	06:52
23	Thank you.	06:52
24	MR. ANSORGE: We'd like to take a break to see	06:52
25	if we have any questions.	06:52

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1	Five minutes okay, Mr. McGee?	06:52
2	MR. MCGEE: As long as you need. We can go	06:53
3	off.	06:53
4	MR. ANSORGE: All right. We'll go off the	06:53
5	record.	06:53
6	THE VIDEOGRAPHER: We are now going off the	06:53
7	record. The time is 6:53 p.m.	06:53
8	(Break taken in proceedings.)	06:53
9	THE VIDEOGRAPHER: We are now back on the	07:01
10	record. The time is 7:01 p.m.	07:01
11	MR. ANSORGE: Dr. Sadowski, thank you for your	07:01
12	patience and grace today. No questions from us. We're	07:01
13	happy to close the deposition at this time.	07:01
14	Mr. McGee, should we go off the record?	07:01
15	MR. MCGEE: Yeah. We can go off. But before	07:01
16	we go off, I guess I would like to note Google has	07:01
17	continued production of documents after the March 4th	07:01
18	deadline for document production, so I won't be closing	07:01
19	this deposition. But we can argue about that,	07:01
20	Dr. Ansorge, later.	07:02
21	MR. ANSORGE: Yeah. We can let Dr. Sadowski	07:02
22	get to her kids and we can argue about that, you know,	07:02
23	before and after our further brush of meet and confers.	07:02
24	MR. MCGEE: Yeah.	07:02
25	MR. ANSORGE: Okay. So with that, we can go	07:02

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1	off the record.	07:02
2	MR. MCGEE: Yes.	07:02
3	THE VIDEOGRAPHER: Conclusion of depo?	07:02
4	We are now going off the record. The time is	07:02
5	7:02 p.m. and this concludes today's testimony given by	07:02
6	Caitlin Sadowski. The total number of media units used	07:02
7	was seven, and will be retained by Veritext Legal	07:02
8	Solutions.	07:02
9	(Whereupon, the deposition adjourned at 7:02 p.m.)	
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